

KHOTSYANOVA, T. L., and STRUCHKOV, G. T.

"The X-Ray Investigation of Crystals of Some Ferrocene Derivatives"
(Section 8-10) a paper submitted at the General Assembly and International Congress
of Crystallography, 10-19 Jul 57, Montreal, Canada.

C-3,800,189

KHOTSYANOVA, T. L., STRUCHKOV, G. T. and KITAYGORODKIY, A. Y.

Institute of Elemento-Organic Compounds, Moscow- "The Crystal Structure of Some Tropylium Salts"(Section 7-11) a paper submitted at the General Assembly and International Congress of Crystallography, 10-19 Jul 57, Montreal, Canada.

C-3,800,189

KHOTSYANOVA, T. L. and STRUCHKOV, G. T.

Institute of Elemento-Organic Compounds, Moscow-"The Crystal Structures of Diphenyl-halogenonium Compounds" (Section 7-9) a paper submitted at the General Assembly and International Congress of Crystallography, 10-19 Jul 57, Montreal, Canada.

C-3,800,189

~~KHOTSYANOVA~~

Crystalline structures of diphenyliodonium halogens. Kristallo-
grafiia 2 no.1:51-58 '92. (MLRA 10:7)

1. Institut elementoorganicheskikh soedineniy.
(Crystallography) (Iodonium compounds)

70-3-9/20

AUTHOR: KhotSYANOVA, T.L.
 Struchkov, Yu.T. and KhotSYANOVA, T.L.
 TITLE: X-ray investigation of the crystals of some ferrocene
 derivatives. (Rentgenograficheskoe issledovaniye kristallov
 nekotorykh proizvodnykh ferrotsena)
 PERIODICAL: "Kristallografiya" (Crystallography), 1957,
 Vol. 2, No.3, pp. 382 - 383 (U.S.S.R.)

ABSTRACT: The investigation of substituted ferrocene derivatives
 has been undertaken to determine their molecular configuration
 in crystals, since from a theoretical point of view there are
 several possible configurations, corresponding to various rota-
 tional isomers. It is also necessary to establish what fac-
 tors determine a choice of a configuration realised in crystal:
 a specific mutual influence of substituents or a tendency to
 minimise steric hindrances in a molecule and to acquiring maxi-
 mum density of packing.

The crystals of the diketoferrocenes investigated are
 characterised by the data in Table 1, p. 382.

The crystal structure of dibenzoylferrocene, $\text{Fe}(\text{C}_5\text{H}_4\text{COC}_6\text{H}_5)_2$,
 has been investigated in greater detail. Tentative data on the
 signs of the structure amplitudes have been obtained by mini-
 misation of a three-dimensional Patterson function and by
 application of the statistical approach. Atomic co-ordinates

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70-3-9/20

X-ray investigation of the crystals of some ferrocene derivatives. (Cont.)

have been determined by a three-dimensional electron-density distribution. Bond distances are: $\text{Fe}-\text{C} = 2.05 \pm 0.02 \text{ \AA}$; $\text{C}-\text{C} = 1.41 \pm 0.03 \text{ \AA}$ (in the ferrocene nucleus), $1.39 \pm 0.03 \text{ \AA}$ (in the benzene rings) and $1.52 \pm 0.02 \text{ \AA}$ (between atoms of the cyclic rings and atoms of a ketogroup); $\text{C}-\text{O} = 1.21 \pm 0.01 \text{ \AA}$. The benzoyl groups are not located in planes of five-membered rings but are turned out of them by rotation about ordinary bonds $\text{C}-\text{C}$ for minimising steric hindrances in the molecule. In the crystal the molecule has an asymmetric configuration corresponding to the rotational 1,2'-isomer. The packing coefficient of this structure has the usual value 0.76.

Determination of the signs of structure amplitudes for diacetyl-, dipropionyl- and dibutyrylferrocenes has appeared more difficult since the ferrous atom does not take part in a great number of reflexions because its co-ordinates have special values. This notwithstanding, comparison of unit cells of dibenzoyl β , diacetyl- and dipropionylferrocenes reveals some similarity between them and has made it possible to propose an approximate molecular orientation for the two latter compounds. This approximate orientation has been made more precise by calculation of two-dimensional series which also indicate the

Card 2/3

70-3-9/20

X-ray investigation of the crystals of some ferrocene derivatives. (Cont.)

1,2' -configuration. A molecule of dibutyrylferrocene occupies in the crystal a special position with the symmetry 2; its orientation in the unit cell has been established by a two-dimensional approach.

The investigation of some other disubstituted ferrocene derivatives is in progress (di-p-bromophenylferrocene, dimethyl ester of ferrocene dicarboxylic acid and dialkylferrocenes).

(Full translation of text.) There are 1 figure and 1 table.
ASSOCIATION: Institute of Elementary Organic Compounds (Institut Elementoorganicheskikh soedineniy)

SUBMITTED: February 22, 1957.

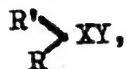
AVAILABLE: Library of Congress

Card 3/3

70-3-10/20
 AUTHOR: Khotsyanova, T.I. and Struchkov, Yu.T.
 TITLE: The crystal structures of diphenylhalogenonium compounds.
 (Kristallicheskkiye struktury difenilgalogenonievyykh soyesiniy)
 PERIODICAL: "Kristallografiya" (Crystallography), 1957,
 Vol.2, No.3, pp. 384-385 (U.S.S.R.)
 ABSTRACT: The present work constitutes a part of a more general investigation of halogenonium compounds which is now in progress. These compounds contain a halogen atom X = Cl, Br, I in a valence state:



The best known representatives of this series of compounds have the following general formulae:

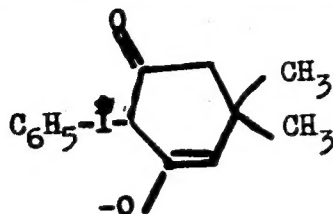


where R and R' are organic radicals, Y is an 'anion' (Cl⁻, Br⁻, I⁻, [BF₄]⁻ etc.). Some cases are known when an 'anion' and a 'cathion' of halogenonium compound represent parts of the same molecule, as exemplified by phenyldimedonyliodon,

Card 1/5

70-3-10/20

The crystal structures of diphenylhalogenoniave compounds.
(Cont.)



From the chemical point of view an investigation of such compounds is of interest for showing the nature of an X - Y bond (which in some cases is not purely ionic but has an intermediate character) and for establishing a valence configuration of a central halogen atom X.

The crystals of diphenyliodonium chloride and iodide are isomorphous (see table, p. 384)

The co-ordinates of heavy atoms have been determined by a two-dimensional Patterson function $P(x, 0, z)$ and by Harker section at $y = 1/2$. The full structures of these compounds have been established by calculating a three-dimensional electron-density distribution.

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Bond distances are: C - I = 2.08 Å, I - Cl = 3.08 Å, I - I = 3.29 Å. The bonds I - Cl and I - I are longer than C - I.

70-3-10/20

The crystal structures of diphenylhalogenonium compounds.
(Cont.)

covalent bonds and approach ionic bonds. The molecules of both compounds have T-shaped configuration: $C - I - C = 98^\circ$, $C - I - Cl = 87^\circ$ and 174° . Benzene rings are turned about $I - C$ bonds relative to the $C - I - C$ plane in order to remove steric hindrances between them. The molecules in crystal are united in 'dimeric' pairs at symmetry centres ($1/4, 1/4, 0$), approaching each other by their polar ends; the distances between these parts of the molecules ($I \dots Cl = 3.20 \text{ \AA}$, $I \dots I = 3.34 \text{ \AA}$) are remarkably shorter than the sums of the van der Waals radii. In iodide crystals intra- and inter-molecular distances $I \dots I$ are essentially equal so that this structure may be regarded as ionic. The packing of non-polar parts of the molecules (benzene rings) has the usual density (van der Waals radii are $I \ 2.1 \text{ \AA}$, $C \ 1.8 \text{ \AA}$, $H \ 1.1 \text{ \AA}$).

The crystals of fluoroborates of diphenyliodonium, diphenylbromonium and diphenylchloronium are not isomorphous (see table, p.385).

For determining the structure of diphenyliodonium fluoroborate two-dimensional Patterson functions calculated with reflections $0k_l$, also $1k_l$ and $3k_l$ (generalised projections) and three-dimensional electron-density distributions have been applied.

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70-3-10/20

The crystal structures of diphenylhalogenonium compounds.
(Cont.)

The investigation of diphenylchloronium and diphenylbromonium fluoroborates is less detailed (two-dimensional Patterson functions, their minimising, two-dimensional electron-density maps); it is intended to undertake further refinement by three-dimensional electron-density calculation. In these purely ionic structures cations have an angular configuration, the angle $C - X - C$ exceeds 90° and benzene rings are turned out of the plane $C - X - C$ to remove steric hindrances. The packing of these bulky cations and tetrahedral anions $[BF_4]^-$ is of interest.

The non-centrosymmetrical structure of a double compound $(C_6H_5)_2ICl \cdot HgCl_2$ has been determined by three Patterson and electron-density projections. The crystals belong to space group $P2_12_12_1$ with four molecules in the unit cell ($a = 13.50 \pm 0.05$, $b = 5.82 \pm 0.03$, $c = 18.60 \pm 0.10 \text{ \AA}$). $HgCl_2$ molecules lose their individuality in crystal, forming a peculiar polyhedral chain with shared chlorine ions extended along a 2_1 axis parallel to $[010]$. Molecules $(C_6H_5)_2ICl$ have

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APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722310015-0"

(Cont.)

The crystal structures of diphenylhalogenonium compounds.
T-shaped configuration (similar to that found in the diphenyliodonium chloride crystals) and adjoin this polyhedral chain by their polar parts, approaching Hg atoms with their chlorines. Non-polar parts of these molecules pack themselves in the usual manner. (Full translation of text) There are 2 tables.

ASSOCIATION: Institute of Elementary Organic Compounds.
(Institut Elementoorganicheskikh soedineniy)

SUBMITTED: February 22, 1957.

AVAILABLE: Library of Congress

Card 5/5

HO7SYANOVA, T. L.

HO7SYANOVA, T. L.; STROKOV, Yu. V.; HO7SYANOVA, Tat'yana Lvovna;
VODIN, N. Ya.; SEMANOV, S. S.

"The Crystal Structures of Troglite Perchlorate and Iodide"

a report presented at Symposium of the International Union of
Crystallography Leningrad, 21-27 May 1979

0.3100

1960
301/1-10-1

AUTHORS:

Kitaygorodskiy, A. I., Struchkov, Yu. T., Vol'pin, M. Ye., Kuramov, D. N.

TITLE:

Crystal Structure of Tropylium Perchlorate and Iodide

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye Khimicheskikh nauk, 1960, Nr 1, pp 39-44 (USSR)

ABSTRACT:

X-ray diffraction study of the structure of tropylium perchlorate and iodide monocrystals was made, using the method of three-dimensional electron density reconstruction. The following cell constants are given:

	$[C_7H_7][ClO_4]$	$[C_7H_7]I$
$a = b(\text{\AA})$	9.39 ± 0.04	9.01 ± 0.02
$c(\text{\AA})$	8.54 ± 0.04	8.22 ± 0.02
$V(\text{\AA}^3)$	652	678
$d_{\text{measured}}(\text{g/cm}^3)$	~ 1.4	~ 1.8
$d_{\text{calculated}}(\text{g/cm}^3)$	1.46	1.89
M	190.6	213.05
n	3	3

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Crystal Structure of Tropylium
Perchlorate and Iodide

78061
SOV/62-60-1-7/7

The radius of tropylium ring, length of C - C bond and other data are given in Figs. 1, 2, 3, 4, and 5. There are 5 figures; and 5 references, 1 U.K., 1 Danish, 3 Soviet. The U.K. reference is: M. G. S. Dewar, R. Pettit, J. Chem. Soc., 10.1 (1956).

ASSOCIATION: Institute of Element-Organic Compounds Academy of Sciences USSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

SUBMITTED: April 30, 1958

Card 2/5

Crystal Structure of Tropylium
Perchlorate and Iodide

78061
SOV/62-60-1-7/37

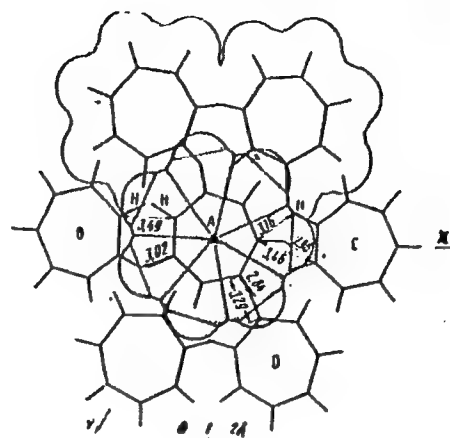
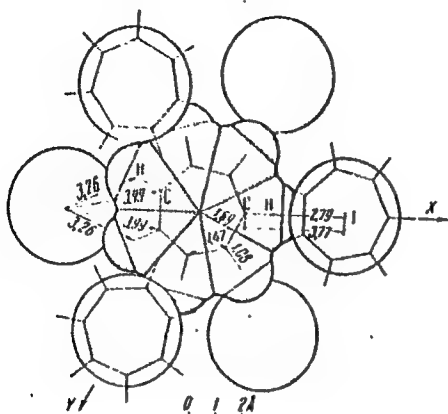


Fig. 4. Contacts cation-anion
in structure of tropylium iodide.

Fig. 5. Contacts cation-cation
in structure of tropylium iodide.

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STRUCHKOVA, Yu.T.; KHOTSYANOVA, T.L.

Crystal structure of diphenyliodonium fluoroborate. Izv. AN SSSR
Otd.khim.nauk no.5:821-831 My '60. (MIRA 13:6)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk
SSSR.

(Iodonium compounds)

STRUCHKOV, Yu.T.; KHOTSYANOVA, T.L.

Steric hindrances and conformation of molecules. Report no.3:
Structure of a 2,6-dichloro-4-nitrodimethylaniline molecule and
crystal. Izv.AN SSSR Otd.khim.nauk no.8:1369-1378 Ag '60.
(MIRA 15:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Aniline) (Steric hindrance)

KHOTSYANOVA, T.L.; AVOYAN, R.L.

Preliminary X-ray study of some triphenyloxonium salts. Zhur.
strukt.khim. 4 no.1:113 Ja-P '63. (MIRA 16:2)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Oxonium compounds) (X-ray crystallography)

KHOTSYANOVA, T.L.; STRUCHKOV, Yu.T.

Crystalline and molecular structure of 2,6-dichloronaphthalene.
Zhur. strukt. khim. 5 no.3:404-406 My-Je '64.

(MIRA 18:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KHOTSYANOVA, T.L.; ROBAS, V.I.; SEMIN, G.K.

Molecular crystals with the elements of disorder in their structure. Crystalline structure and nuclear quadrupole resonance spectra of pentabromofluorobenzene and pentachlorofluorobenzene. Zhur. strukt. khim. 5 no.4:644-646 Ag '64.
(MIRA 18:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

BABUSHKINA, T.A.; KHOTSYANOVA, T.L.; SELIN, G.K.

Crystal structure and nuclear quadrupole resonance spectra of α -79
and I127 in hexabromo and hexaiodobenzene. Zhur. strukt. ~~khim.~~
khim. 6 no.2:307-308 Mr-Apr '65. (MIRA 18:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KHOTSYANOVICH, Georgiy Gavrilovich

[Wages and work norms in state farm vineyards] Zarabotnaya plata
i normirovanie truda v vinogradarskikh sovkhozakh. Odesskoe obl.
izd-vo, 1957. 44 p. (MIRA 12:4)
(Wages) (State farms)

KHOTSYANOVICH, G.

Wages at viticulture state farms. Sots.trud no.8:77-79 Ag '57.

(MIRA 10:9)
(Viticulture--Production standards)

KHOTYANOVICH, S.I.; GIKENE, A.Yu.

Obtaining electrophotographic images in liquid developers. Zhur.
nauch.i prikl.fot.i kin. 7 no.1:30-35 Ja-F '62. (MIRA 15:3)

1. Nauchno-issledovatel'skiy institut elektrografii, Vil'nyus.
(Xerography)

L 17044-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD
 ACC NR: AP6000670 UR/0236/65/000/002/0037/0048 44 55 47
 AUTHOR: Khotyanovich, S.I.; Matulis, Yu.Yu. 44 55 03
 ORG: Institute of Chemistry and Chemical Technology AN LitSSR (Institut khimii i khimicheskoy tekhnologii AN LitSSR) 44 55
 TITLE: Electrodeposition of platinum from alkaline platinate electrolytes
 SOURCE: AN LitSSR. Trudy. Seriya B. Fiziko-matematicheskkiye, khimicheskkiye, geologicheskkiye i tekhnicheskkiye nauki, no.2, 1965, 37-48
 TOPIC TAGS: electrodeposition, platinum, corrosion resistance, electrolysis
 ABSTRACT: The article is devoted to a study of certain phenomena which take place during the electrodeposition of platinum from alkaline platinate electrolytes. A study was also made of the quality and corrosion resistance of platinum coatings as a function of electrolyte composition and electrolysis conditions. On the basis of the cathode polarization curves obtained, a determination was made of the ranges of current density over which there is deposited platinum alone or a mixture of platinum and hydrogen. It was established that deposits without hydrogen have the highest corrosion resistance; this resistance increases with increased holding time of the electrolyte after its preparation or after heating for several hours. Platinum coatings up to a thickness of 1-2
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L 11044-66

ACC NR: AP6000670

microns are solid and without cracks. Deposition of thicker layers leads to cracking of the deposits and to decreased corrosion resistance. Electron microscope examination shows that the size and number of pores in the thin layers decreases with an increase in the density of the cathode current right up to the limiting value. The quality of platinum electrodeposits depends greatly on the preparation of the under layer. Orig. art. has: 12 figures. ^{Sub}

SUB CODE: 11,07 SUBM DATE: 08Oct64/ ORIG REF: 004/ OTH REF: 001

BC
Card

2/2

KHOTSYANOVSKIY, I.I.

Intensity of blood supply in the bones of animals of various constitutional types. Zhur.ob.biol. 16 no.6:505-510 M-D '55.
(MLRA 9:3)

**1. Altayskiy sosal'nyy nauchno-issledovatel'skiy institut semle-
deliya i shivotnovodstva.**

(CATTLE) (BONES--BLOOD SUPPLY)

KHOTSYANOVSKIY, O. I.: Master Chem Sci (diss) -- "Polarographic investigation of simple and some complex ions of cadmium in mixed solvents". Kiev, 1958. 14 pp (Min Higher Educ Ukr SSR, Kiev Order of Lenin Polytech Inst, Chair of Phys and Colloid Chem), 100 copies (KL, No 18, 1959, 121)

153-58-1-7/29

AUTHORS: Khotsyanovskiy, O.I., Kudra, O.K.

TITLE: Polarographic Investigation of Halide Complexes of Cadmium in Mixed Solvents. Communication 1: Methanol-Water (Polyarografi-cheskoye issledovaniye galogenidnykh kompleksov kadmiya v smeshannykh rastvoritelyakh. Soobshcheniye 1: Metanol-voda)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 1, pp. 43-53 (USSR)

ABSTRACT: As is known, a solvent is not indifferent to the properties of complex compounds. The influence of various solvents on the structure of these compounds is little investigated up till now. The behavior of complex compounds in the mixtures of the solvents is almost less clarified. In this paper the authors describe a systematic polarographic investigation of the influence of aqueous solvents on the properties of some complex compounds of cadmium carried out by them (see table 1 and figure 1). The composition of these compounds and the relative liability of the constants were polarographically investigated. It was found that the addition

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153-58-1-7/29

Polarographic Investigation of Halide Complexes of Cadmium in Mixed Solvents.
Communication 1: Methanol-Water

of ethyl alcohol causes a displacement of the fields of existence (oblasti sushchestvovaniya) of the investigated complex compounds (see tables 2 to 5). A linear dependence could be found between -10 gK and $1/D$ in chloride, bromide and iodide complexes of cadmium. There are 5 figures, 5 tables, and 24 references, 20 of which are Soviet.

ASSOCIATION: Kafedra fizicheskoy i kolloidal'noy khimii (Chair of Physical and Colloidal Chemistry)

SUBMITTED: September 23, 1957

Card 2/2

5(4)

AUTHORS: Khotsyanovskiy, O. I., Kudra, O. K. SOV/153-58-2-7/30

TITLE: Polarographic Investigation of the Halogen Complexes of Cadmium in Mixed Solvents (Polyarograficheskoye issledovaniye galogenidnykh kompleksov kadmiya v smeshannykh rasvoritelyakh) Communication II. Ethanol-Water (Soobshcheniye II. Etanol-voda)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 2, pp 36 - 42 (USSR)

ABSTRACT: In the previous paper by the authors (Ref 1) certain rules governing the changes of the composition and the instability constants of cadmium halo complexes in aqueous methyl alcohol solutions were found. The present paper deals with the explanation of the influence of the nature of the solvent on the complexes if methanol is substituted by its homologs; it forms a logical continuation of the earlier papers. The solutions contained 20.45 and 65 per cent by volume ethanol. Solutions containing LiCl and LiBr -

Card 1/4

Polarographic Investigation of the Halogen Complexes of Cadmium in Mixed Solvents. Communication II. Ethanol-Water SOV/153-58-2-7/30

0.1 - 2.0 M, LiJ_2 - 0.01 - 2.0 M, LiNO_3 - 0.1 M, and $\text{Cd}(\text{NO}_3)_2$ - $4 \cdot 10^{-3}$ M were used for the polarography.

The temperature amounted to $25 \pm 0.1^\circ$. The method is described in detail in reference 1. Figures 1-3 and tables 1,2 give the results obtained. The half-wave potential of cadmium was displaced with the increasing ethanol content on the background of the indifferent electrolyte 0.1 M LiNO_3 into the more positive range of potentials, as compared to aqueous solutions (Table 1, in agreement with reference 2). In the presence of halogen salts the said potential was displaced into the negative range (Table 2). As the value of the limit current remained about the same, a complex formation must be assumed. The cadmium reduction was in all cases reversible. The composition and the instability constants of the complexes formed were determined according to the same methods as mentioned in reference 1. In the 20% alcohol solution (for

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Polarographic Investigation of the Halogen Complexes of Cadmium in Mixed Solvents. Communication II. Ethanol-Water SOV/153-58-2-7/30

bromides) and in the 45% solution (also for chlorides) the following complexes were found: CdCl^+ , CdCl_2 , CdBr^+ and CdBr_2 . In alcohol solutions with higher concentrations only the complexes CdCl_2 and CdBr_2

occurred. The same complexes as in aqueous solutions were found for iodide complexes of cadmium in a 20% alcohol solution (Ref 1), i.e. with coordination numbers from 1 to 4. With the increase of the alcohol content the equilibrium was displaced in the direction of the coordination saturated complexes. Already in a 65% alcohol solution the complex CdJ_4^{2-} dominated within the whole concentration range investigated. From the comparison of the methanol solutions it may be seen that ethanol additions influence the equilibrium displacement of the complexes to a much higher degree than methanol additions. The values of the instability constant decrease with the increase of the alcohol content in the solutions. Between $-\log K$ and $1/D$ exists a linear dependence for the complexes investigated.

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Polarographic Investigation of the Halogen Complexes of Cadmium in Mixed Solvents. Communication II. Ethanol-Water SOV/153-58-2-7/30

It was proved that the increase of the influence of the alcohol additions of the changes of the instability constant with the increase of the coordination number is bound to the stepwise character of the dissociation of complexes. There are 4 figures, 5 tables, and 9 references, 7 of which are Soviet.

ASSOCIATION: Kiyevskiy politekhnicheskii institut (Kiyev Polytechnical Institute) Kafedra fizicheskoy i kolloidnoy khimii (Chair of Physical and Colloid Chemistry)

SUBMITTED: September 23, 1957

Card 4/4

KHOTS'YANOVSKIY, O.I.

Polarographic study of water-propanol solutions. Zhur.neorg.khim.
7 no.2:390-393 F '62. (MIRA 15:3)
(Cadmium) (Polarography) (Propyl alcohol)

KHOTSYANOVSKIY, O.I.

Polarographic behavior of cadmium and lead ions in aqueous
solutions of acetic acid. Ukr.khim.zhur. 28 no.9:1107-1110
'62. (MIRA 15:12)

1. Kiyevskiy politekhnicheskii institut.
(Cadmium—Analysis) (Lead—Analysis)
(Polarography)

KHOTTS, G. I.

KHOTTS, G. I.: "Problems in the psychology of comparison in teaching foreign languages in the fifth and sixth classes of secondary school." Moscow, 1955. Moscow City Pedagogical Inst imeni V. P. Potemkin. (Dissertation for the Degree of Candidate of Pedagogical Sciences)

SO: Knizhnaya Letopis' No. 46, 12 November 1955. Moscow.

KLYUCHNIKOV, A.I., kandidat sel'skokhozyaystvennykh nauk; KHOTULEV, M.I.;
inzhener; DZYUBLO, A.F., agronom.

Results of testing castor bean shellers. Sel'khoz mashina no.12:
4-7 D '55. (MLRA 9:3)

(Agricultural machinery)

KHOTULEV, V. K.

AID P - 1596

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 5/27

Authors : Druzhinin, N. N., Kand. of Tech. Sci., and
Khotulev, V. K., Eng.

Title : Methods of calculation of the electric drives of loop-
holders of thin-sheet rolling mills

Periodical : Elektrichestvo, 3, 22-27, Mr 1955

Abstract : The author describes an analytical and experimental study made with thin-sheet hot rolling at one of the steel mills of the USSR. Earlier approaches to the problem as if it were a static one resulted in confusion. The author studies the problem as a dynamic one, and takes into consideration the relation-between the forward flow of the metal and its pull. The solution of the equation of motion disclosed that the inclusion of the loop-holder on a tight driving belt leads to the formation of a loop. The results of the analysis of the drive permit establishing a method of calculation and of selection of the

AID P - 1596

Elektrichestvo, 3, 22-27, Mr 1955

Card 2/2 Pub. 27 - 5/27

electric drive. A short numerical example follows.
Three diagrams, 3 Russian references (1948 - 1953)

Institution: Central Scientific Research Institute of Technology and
Machine Building

Submitted : D 7, 1954

KHOTULEV, V. K.

AMD P - 3247

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 2/25

Authors : Druzhinin, N. N., Kand. Tech. Sci., Dotsent, and V. K. Khotulev,
Eng., Moscow

Title : Problems of dynamic drop of motor speed in continuous rolling
mills

Periodical : Elektrichestvo, 9, 8-14, S 1955

Abstract : The authors analyze the problems arising during the transient
period, when the speed drop in a continuous rolling mill may
exceeds the steady-state speed drop. In extreme cases, several
oscillations in speed may occur between stands with the result
of "ballooning" or "stretching" the product. The authors
analyze phenomena occurring in the transient period in order to
find relations between mechanic (dynamic and static) and electrical
characteristics. This enables them to select the type of electric
drive of the rolling mill. Analytical calculations are favorably
compared with experimental data obtained from tests. The authors

AID P - 3247

Elektrichestvo, 9, 8-14, 8 1955

Card 2/2 Pub. 27 - 2/25

conclude that the use of speed drives is more efficient from the point of view of the impact speed drop. Seven diagrams, 5 references 1949-1954, 4 Soviet.

Institution : None

Submitted : Jo 3, 1955

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 84 (USSR) SOV/137-57-6-9905

AUTHORS: Druzhinin, N.N., Khotulev, V.K.

TITLE: An Investigation of the Electric Drive for Thin Strip Mill Loop Repeaters (Issledovaniye elektroprivoda petledezhatel'nykh stanov)

PERIODICAL: V sb.: Prokatnyye stany, Nr 7. Moscow, Mashgiz, 1956, pp 5-17

ABSTRACT: In continuous hot rolling, when the metal being rolled is passing simultaneously through a number of stands (S), tensile or compressive stresses may develop in the section between S due to changes in a number of production and electrical parameters both in transient and in steady conditions. To prevent any tangling up of the loop forming between the S of thin strip mills, [tower-type] loop repeaters (L) are provided. The L drive is usually provided by electric motors or compressed-air cylinders. As a result of investigations of the rolling process in the finishing group of S of the 1450 thin strip mill of the Magnitogorsk Metallurgical Kombinat, the following may be deemed to be established: 1. The moment of the L motor does not determine the tension on the strip under steady

Card 1/2

SOV/137-57-6-9905

An Investigation of the Electric Drive for Thin Strip Mill Loop Repeaters

conditions. The tension on the strip in rolling both with and without L is determined by the ratio between the speeds of the S motors. 2. At a given L-motor torque the height to which it rises depends upon the tension on the strip: the greater the tension, the less the rise of the L. Thus, the L may be used as a tension indicator. 3. A loop of strip may form when the L is turned on as a result of the force it brings to bear upon the strip. This type of loop should be called a "forced loop", as distinct from the free loop formed by the effect upon the rate of rotation of the motors of the adjacent S. 4. The continuous rolling process with forced loops at low tensions may be employed on other types of continuous mills, e.g., in the rolling of merchant bars. The presence of an L using a forced loop as an indicator of the tension makes it possible to automate the process. In this case, the impulse produced as a function of the angle of rotation of the L has to act upon the S drive system.

B.Ye.

Card 2/2

KHOTULEV, V.K.

DRUZHININ, N.N., kandidat tekhnicheskikh nauk; KHOTULEV, V.K., inzhener.

Investigating the electric drive of coil holders for strip rolling
mills. [Trudy] TSNIITMASH no.80:5-17 '56. (MIRA 10:1)
(Rolling mills--Electric driving)

KHOTULEV, V.K.

DHYZHININ, N.N., kandidat tekhnicheskikh nauk; KHOTULEV, V.K., inzhener.

Theoretical and experimental investigation of rapid deceleration
in the functioning of rolling mill motors. [Trudy] TSNIITMASH

no.80:18-34 '56.

(MIRA 10:1)

(Rolling mills--Electric driving)

(Electric motors)

KHOTULEV, V.K.

DRUZHININ, N.N., kandidat tekhnicheskikh nauk; KHOTULEV, V.K., inzhener.

Experimental investigation of power used for hot and cold rolling on
continuous rolling mills. [Trudy] TSNIITMASH no.80:130-145 '56.

(MIRA 10:1)

(Rolling (Metalwork))—Electric driving)

DRUZHININ, N.N., doktor tekhn. nauk; KALININ, V.P., kand. tekhn. nauk;
KHOTULEV, V.K., inzh.

Selection of rolling methods on continuous section mills.
Stal' 24 no.8:729 Ag '64. (MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-
konstruktorskiy institut metallurgicheskogo mashinostroyeniya.

KHOTULEV, V.V.; SAPOZHNIKOV, A.S.

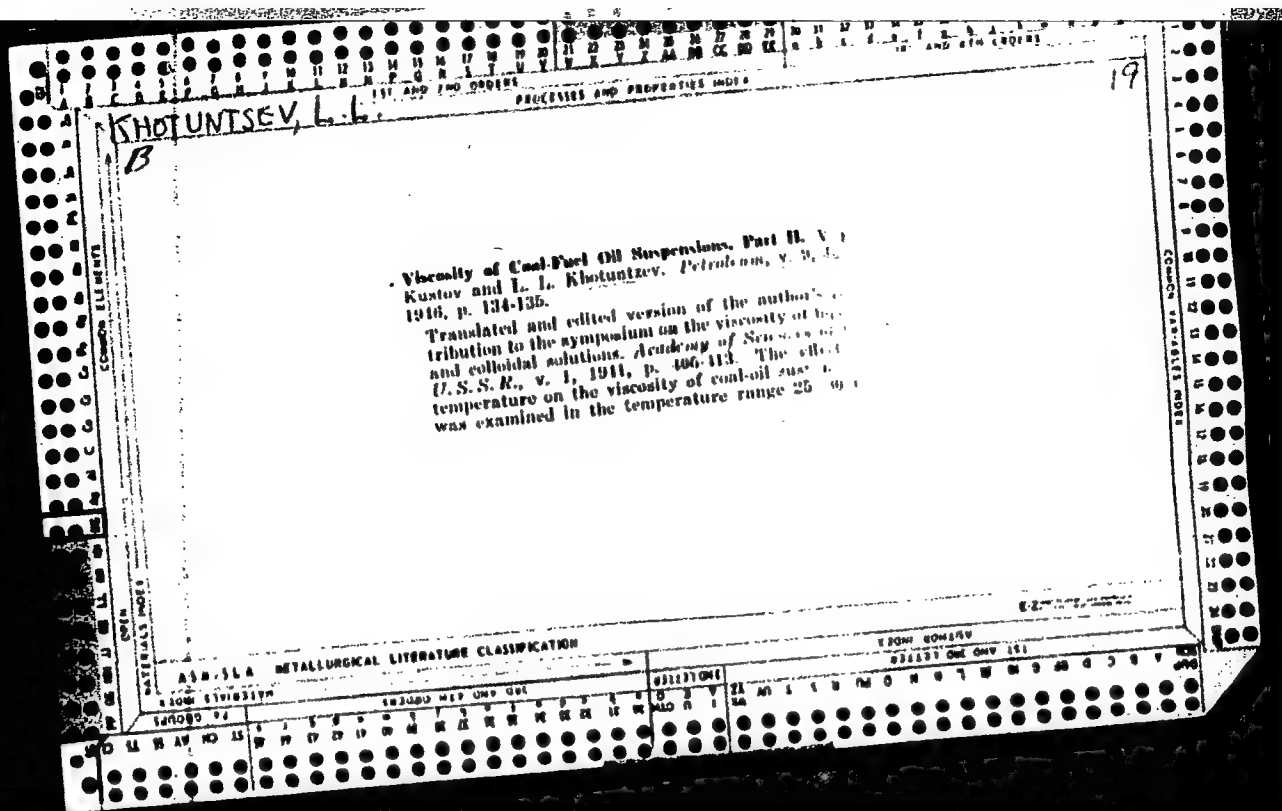
Experience in the manufacture of nonstandardized equipment in the
mechanical repair shops of enterprises. Der.prom. 10 no.9:32-34 S
'61. (MIRA 14:10)

1. Moskovskiy mebel'no-sborochnyy kombinat No.2.
(Moscow--Furniture industry--Equipment and supplies)

KHOTUNTSEV, L. L. 21
 ca
 Viscosity of mazut coal suspensions. V. P. Kustov and L. L. Khotuntsev (Disperse Fuel Lab., Energetics Inst., Acad. Sci. U.S.S.R.). *Akad. Nauk S.S.S.R., (Mikr. Tekh. Nauk, Ind. Mashinostroyeniya, Sovershanie Vyzhivani Zhidkosti i Kollod. Raznosn (Conf. on Viscosity of Liquids and Colloidal Solns.))* 1, 105 (1911). Samples included suspensions in commercial mazuts of charcoal, grain size 45 and 75 μ , solid phase content 10%, 15%, and 20%, and of coal powder, grain size 44, 74, and 100 μ (resp., 325, 200, and 150 mesh), solid content 20%, 34%, 40%, and 50%. Measurements were made in a horizontal capillary viscometer, between two 100-cc. reservoirs, under pressures up to 100 cm. Hg. Level readings had to be made with the aid of a spherical cork float (dia 0.27 mm.), carrying a steel ring; length of capillary 100 cm., diam. 0.8, 0.4 cm. Laminarity of the flow was confirmed.

From plots of the viscosity η against the pressure it was ascertained that the limiting shearing stress is practically zero and can be disregarded. With 30% coal suspensions, η drops sharply with rising temp., from 20° to 80°, where the curves for various samples seem to converge. The shape of the η -temp. curves is dist. primarily by that of the oil used. Charcoal suspensions show, below 80°, higher η than suspensions of coal of equal content (20%); this is ascribed to higher adsorption capacity and resulting immobilization of larger amts. of the liquid medium. The effect of this factor diminishes with rising temp. and disappears at about 80°. For both coal and charcoal suspensions, η rises sharply with increasing content of solid phase; e.g., coal 20%, 30%, 40%, $\eta = \text{resp.}, 4, 6.9, 16.8$ poises, at 40°. At ordinary temp. the suspensions lose their fluidity at about 50° solid phase. The effect of grain size is slight; e.g., 20% charcoal suspension at 40°, grains, resp., 44, 74, 100 μ , $\eta = \text{resp.}, 8.33, 8.00, 8.00$ poises. Results obtained in glass and in steel tubes do not differ materially; hence the slippage effect is small, particularly above 50°. Homogenization of the suspensions by repeated passing through a colloidal mill, without change of grain size, results in markedly lower η . This is due only to a higher degree of homogeneity, not to higher dispersity.

N. Thon



KHOTUNTSEV, L. L.

✓ Waterproofing of fuel, ore, or other briquets. A. B. Khlutsev and L. L. Khotuntsev. U.S.S.R. 104,023. Oct. 25, 1958. Briquets are treated with petrolatum or paraffin heated to 100-30° or their emulsions of the water-in-oil or oil-in-water type. The petrolatum or paraffin is added as a soln. in a petroleum product or as a product of solid-fuel conversion. The effectiveness of the treatment is improved by addn. of up to 10% rosin or up to 5% Al naphthenate. M. Hovch

2

Fraser

KHOTUNTSEV, L.L.

✓ Effective utilization of highly viscous mazut enriched with water. D. V. Kantorovich, V. M. Ivanov, L. L. Khotuntsev, L. S. Rapirovets, and V. V. Romadits. *Khim. i Tekh.*

fuel
 ref. *Topkiv's Mazut* 1957, No. 1, 22-7. — Dispersed mixts. of mazut and water (15-20%) formed emulsions which were stable on prolonged storage at ambient temps. and at 100°. Effective burning of this fuel was achieved when the coeff. of excess of air was 1.1. Under these conditions the combustion was complete, yielding 18,000,000 kcal./cu.m./hr. As compared with the fuel without water, the same was more stable owing to intense evapn. and better mixing of the fuel caused by small size emulsion droplets (1-1.5 mm. in diam.) and their microexplosions in the combustion chamber (cf. *Ilinov, C.A.* 49, 12901e).
 A. P. Kotloby

KHOTUNTSEV, L.L.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. Motor and Jet Fuels. Lubricants. I-8

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2583

Author : Ivanov, V.M., Kantorovich, B.V., Rapiovets, L.S.,
Khotuntsev, L.L.

Inst : Academy of Sciences USSR

Title : Fuel Emulsions for Combustion and Gasification.

Orig Pub : Vestn. AN SSSR, 1957, No 5, 56-59

Abstract : In a laboratory combustion chamber, with an air-excess coefficient $\alpha = 1.0; 1.1; 1.2; 1.5$ and 2.0 , combustion was carried out of stable water emulsions of highly viscous fuels, of the "water - oil" type, produced in a high-speed disperser of the Khotuntsev-Pushkin design. Emulsions fed into the combustion chamber were preheated:

Card 1/3

... petroleum residues and tars, a uniform and intensive combustion is attained, with a high degree of completeness of the combustion, using a minimal coefficient of air-excess. Observations were made of the behavior of individual drops of different liquids (kerosene, benzene, emulsion, water, mazut, oil, etc.) injected into stationary air heated at $600-700^{\circ}$. The occurrence of a "micro-explosion" was noted, which decreases the dimensions of the drops, contributes to increased rate of

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722310015-0"

Card 2/3

USSR/Chemical Technology - Chemical Products and Their I-8
Application. Treatment of Natural Gases and Petroleum.
Motor and Jet Fuels. Lubricants.

Abv Jour : Ref Zhur - Khimiya, No 1, 1958, 2583

evaporation and ensures more intensive mixing of fuel
vapor and air. A diagram and description of the dis-
perser are included and the domains of utilization of
the emulsions are enumerated.

Card 3/3

AUTHORS: Makhalov, P. N. and Khotuntsev, L. L. ^{SOV/} 65-58-7-5/12

TITLE: Thermochemical Method for Obtaining Briquettes and Coke Briquettes from Coals and Schists with Small Tendencies to Clinkering. (Termokhimicheskiy metod polucheniya briketov i koksobriketov iz slabospekayushchikhsya ugley i shikht).

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr.7. pp. 29 - 35. (USSR).

ABSTRACT: A method for introducing binding substances in the vapour phase into the briquetting material and their subsequent condensation on the surface of the coal particles is discussed (Ref.1). This is achieved by plasticising the coal mass by treating the same before pressing with hot tar-containing gases. The vaporous tar substances are distributed evenly in the briquetting material, and the high-boiling fractions of coal tar interact physically and mechanically with the coal substances. Consumption of the binding substances can, therefore, be lowered, and lower pressures applied during the pressing of briquetting materials. A method and an apparatus for making briquettes under laboratory conditions are given (Fig.1). Table 1 shows the characteristics of the tested coals; Table 2

Card 1/2

SOV/65-58-7-5/12
Thermochemical Methods for Obtaining Briquettes and Coke Briquettes
from Coals and Schists with Small Tendencies to Clinkering.

results of the first series of experiments. The influence of various technological parameters on the mechanical strength of the briquettes was investigated (i.e. the concentration of the tar substances in the vapour phase, the final temperature of plasticisation of the coal mass, of pressures during pressing etc - Figs. 2, 3 and Table 3). Coke briquettes were made from coal with small tendency to clinkering. The lay-out of an industrial plant for making these coal briquettes from coals and schists is described (Fig.4). For plasticising the coal masses before pressing the same volatile products obtained during the coking of briquettes were used, and in this way part of the heat of the direct coke gases could be used effectively. Table 6: physico-chemical properties of coke briquettes. The authors also give a cost estimate for the process (Table 7). There are 7 Tables, 4 Figures and 5 Soviet References.

ASSOCIATION: IGI AN SSSR.

Card 2/2

1. Coal--Processing 2. Fuels--Production 3. Coke--Physical
properties 4. Coke--Chemical properties

AVRAMENKO, V.I., inzh.; KHOTUNTSEV, L.L., kand.tekhn.nauk

Increasing water-resistance of peat briquets. Torf.prom. 35 no.8:
20-21 ' 58. (MIRA 11:12)

1. Institut goryuchikh iskopayemykh AN SSSR.
(Peat)

KhoTunTsey, L.L.

307/3731

PHASE I BOOK EXPLANATION

Abstracts book 8000. Zhurnal gosudarstvennogo tekhnicheskogo

osobennostey i granitsy topliv (Fuel Gasification and Combustion) Moscow, Izdatel'stvo AN SSSR, 1959. 227 p. (Series: Itogi Nauki i Tekhn., Vol. 11) Extra copy inserted. 1,000 copies printed.

Ed.: E. V. Lavrov; Ed. of Publishing House: V. B. Petrovskiy; Rech. Ed.: I. B. Sorokina.

Summary: This collection of articles is intended for scientific research workers and engineers studying combustion processes and solid fuel gasification.

Contents: This collection concerns the theoretical and experimental study of the mechanism of chemical reactions occurring in combustion and gasification. Results of the isotopic method of studying the gas generating process and its reactions, and the reaction of carbon monoxide and heated coal are analyzed. The pilot plants used in this study are described. Reactions of coal with oxygen, equilibrium, and dissociation and conversion are discussed. The equilibrium of coal oxidation, kinetic data given in tables. The processes of methane oxidation by oxygen and synthesis-gas production by oxidizing methane are discussed. The reduction of oxidation products by carbon are analyzed as is the effect of an excessive amount of air on the burning process. The use of powdered solid fuel. The utilization of heavy petroleum residues and tar for combustion and gasification purposes is also discussed. The principles of physical and chemical analysis, routine control and identification of physical and chemical processes by means of ultrasonic vibrations are also covered. No personalities are mentioned. References accompany all but the first article.

Al'tshuler, M.S., and G.P. Babitskiy. Some Conditions of Normal Operation of Gas Generators With a Purified Air. 139

Flavitskiy, A.P. Problem of Relative Velocity of Powdered Solid Fuel and of Air in an Aerosol Stream in an Experimental Combustion Chamber. 140

Ivanov, V.M., V.Y. Kozlovskiy, I.S. Ryzhenko, and L.N. Kozlovskiy. Utilization of an Emulsion of Heavy Petroleum Residue and Tar for Combustion and Gasification Purposes. 146

Ivanov, V.M. Combustion of Liquid Fuel With the Simultaneous Evaporation of Water Spray in a Closed Reaction Chamber. 169

Rebinder, G.P., and V.B. Al'tshuler. Effect of Pressure on the Behavior of a Fluidized Bed. 168

Rimskiy, M.A. Gas Formation Process in a Coal Combustion During the Steam-Oxygen Blast. 185

Rebinder, G.P., E.V. Lavrov, and E. P. Medvedev. Ultrasonic Vibrations as a Means of Investigating, Controlling and Intensifying the Pyrolytic Chemical Processes of Fuel Production. 205

Lebedev, V.Y. Continuous Hydrogen Production by Means of the Metal-Steam Reaction. 215

AVIATION: Library of Congress

Card 6/6

2/20/60
7-10-60

KHOTUNTSEV, L.L.

LYSIKHINA, Aleksandra Ivanovna, starshiy nauchnyy sotrudnik; REBINDER, P.A., akademik; retsentsent; SERB-SERBINA, N.M., kand.khim. nauk, starshiy nauchnyy sotrudnik, retsentsent; KHOTUNTSEV, L.L., kand.tekhn.nauk, starshiy nauchnyy sotrudnik, red.; ZUBKOVA, M.S., red.izd-va; DONSKAYA, G.D., tekhn.red.

[Surface activating additives for increasing water-resisting properties of pavements made with bitumens and tars] Poverkhnostnoaktivnye dobavki dlia povysheniia vodoustoichivosti dorozhnykh pokrytii s primeneniem bitumov i degtel. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1959. 232 p. (MIRA 13:2)
(Pavements, Bituminous)

SOV/65-59-7-2/12
AUTHORS: Makhalov, P.N., Nikitin, K.G., and Khotuntsev, L.L.
TITLE: Influence of Bitumen Content on the Hot Strength of
Brown-Coal Briquettes (Vliyaniye soderzhaniya bitumov
na termoustoychivost' burougol'nykh briketov)
PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, Nr 7,
pp 3-7 (USSR)

ABSTRACT: In their work the authors used Khristoforov coal dried to 14% residual moisture and ground to 0-1 mm. By extraction with dichloroethane in a large laboratory-scale apparatus (Ref 5) batches with nominal bitumen contents of 11, 6.8, 3.25 and 0% were prepared. From each batch ten 120-g briquettes were made, three of which were used for mechanical and seven for heat-resistance tests. For briquetting the authors used a 60-tonne press giving a briquetting pressure of 1500 kg/cm². For hot-strength tests a procedure described by Werner in 1935 (Ref 8) was used. In this a briquette (Fig 1) is burnt under load under carefully controlled conditions, (with observation) (Fig 2). The heat-resisting index being the time from the start of combustion to briquette failure. The hot strength

Card 1/2

SOV/65-59-7-2/12

Influence of Bitumen Content on the Hot Strength of Brown-Coal
Briquettes

was found to rise with decreasing bitumen contents
(Table). The compression strength briquettes were
230-275 kg/cm², this property having no effect on hot
strength.

There are 2 figures, 1 table and 8 references, 4 of
which are Soviet and 4 German.

ASSOCIATION: IGI AN SSSR (AS USSR)

Card 2/2

IVANOV, V.M.; KANTOROVICH, B.V.; RAPIOVETS, L.S.; KHOTUNTSEV, L.L.

Utilization of heavy petroleum residues and tars in the form of
fuel emulsions for burning and gasification. Trudy IGI 11:156-168
'59. (MIRA 13:6)
(Petroleum as fuel) (Coal tar) (Emulsions)

IVANOV, V.M., kand. tekhn. nauk; KANTOROVICH, B.V., doktor tekhn. nauk;
RAPIOVETS, I.S., inzh.; KHOTUNTSEV, L.L., kand. tekhn. nauk

Water-soaked peat tars from gas producers used as fuel. Torf. prom.
36 no.7:30-32 '59. (MIRA 13:3)

1. Institut goryuchikh iskopayemykh AN SSSR.
(Peat) (Tar) (Fuel)

KHOTUNTSEV, L. L., Dr. Tech Sci — (diss) "Use of disperse systems in the
oil refining processes," Moscow, 1960, 32 pp, 150 cop. (Kalinina Peat
Institute) (KL, 45-60, 124)

KHOTUNTSEV, Leontiy Leont'yevich; DMITRIYEV, S.A., kand.tekhn.nauk, otv.
red.; YEGOROV, N.G., red.izd-va; LEBEDEV, L.A., tekhn.red.

[Physical and chemical phenomena occurring during the briquetting
of solid fuels] Fiziko-khimicheskie iavleniya v protsessakh
briketirovaniia tverdogo topliva. Moskva, Izd-vo Akad.nauk SSSR,
1960. 146 p. (MIRA 13:10)

(Briquets (Fuel))

KHOTUNTSEV, L.L.; POPOV, V.L.; VOLKOV, G.M.

New types of binding material for the briquetting of fine coals.
Ugol' 35 no. 4:51-55 Ap '60. (MIRA 14:4)
(Briquets (Fuel)) (Binding materials)

ETKIN, Valentin Semenovich; GERSHENZON, Yevgeniy Mikhaylovich.
Prinimali uchastiye LAVUT, A.P.; LYUBIMOVA, T.F.; SOINA,
N.V.; KHOTUNTSEV, Yu.L.; ROZHKOVA, G.I.; KARVAKOVA, Ye.S.;
STRUKOV, I.A.; VYSTAVKIN, A.N., retsenzent; ARONOV, V.L.,
retsenzent; MASHAROVA, V.G., red.

[Superhigh-frequency parametric systems using semiconductor
diodes] Parametricheskie sistemy SVCh na poluprovodnikovyykh
diodakh. Moskva, Sovetskoe radio, 1964. 351 p.
(MIRA 17:11)

L 25554-66A) EWT(1)/EWA(h)

ACC NR: AM6004739

Monograph

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B11

Vasil'yev, V. N.; Slobodenyuk, G. I.; Trifonov, V. I.; Khotuntsev, YU. L.

Regenerative semiconductor parametric amplifiers; some problems of theory and design
(Regenerativnyye poluprovodnikovyye parametricheskiye usiliteli; nekotoryye voprosy
teorii i rascheta) Moscow, Izd-vo "Sovetskoye radio", 1965. 447 p. illus., biblio.
Errata slip inserted. 10,500 copies printed.

TOPIC TAGS: parametric amplifier, solid state amplifier, millimeter wave amplifier,
amplifier design

PURPOSE AND COVERAGE: The book contains the theory of regenerative semiconductor
parametric amplifiers, developed on the basis of the theory of linear networks, and
is intended for scientific and engineering-technical workers engaged in the investi-
gation and development of parametric systems, and also for students in higher institu-
tions of learning as a text for the course on "Theoretical Principles of Radio Engi-
neering." The subjects covered are the various amplifier parameters, different meth-
ods of tuning parametric amplifiers, stability of the phase and frequency character-
istics of a parametric amplifier, the operating features of multifrequency parametric
amplifiers, and questions involved in the electrodynamic calculations and the choice
of the amplifier parameters. The book contains in the form of appendices some addi-
tional data and calculations dealing with particular problems touched upon in the
main text. Chs. I, VI, and VII and Secs. 1 and 2 of Ch. II, Secs. 1, 3, and 4 of
Ch. III, and Appendices I, IV, and V were written by G. I. Slobodenyuk; Ch. IV, Secs.
2 and 5 of Ch. III, Secs. 1, 2, and 3 of Ch. V, and Appendices II, III, and VI were

UDC: 621.375.93

Card 1/2

L 25554-66

ACC NR: AM6004739

written by YU. L. Khotuntsev; Sec. 3 of Ch. II and Sec. 4 of Ch. V were written jointly by G. I. Slobodenyuk and YU. L. Khotuntsev; Ch. VIII was written by V. I. Trifonov; and Chs. IX, X, and XI were written by V. N. Vasil'yev.

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Card 2/2 SUB CODE: 09/ SUBM DATE: 24 Jun 65/ ORIG REF: 041/ GTH REF: 032

L 63073-65 EEC(b)-2/EWA(h)/EWT(1) P1-h/PJ-h/P1-h/Pm-h/PeB

ACCESSION NR: AP5013343

UR/0109/65/010/005/0898/0902
621.378.5

AUTHOR: Slobodenyuk, G. I.; Khotuntsev, Yu. L. 1969

TITLE: Parametric-amplifier tuning by controlling the bias and pumping
amplitude of the diode 25

SOURCE: Radiotekhnika i elektronika, v. 10, no. 5, 1965, 898-902

TOPIC TAGS: parametric amplifier, parametric amplifier tuning

ABSTRACT: The tuning of a parametric amplifier (or converter) by controlling the capacitance and modulation factor of the parametric diode, with a fixed pumping frequency, is theoretically considered. The amplifier gain formula given by L. Blackwell and K. Kotzebue ("Semiconductor-diode parametric amplifiers," NY, 1961) is used; no input filter is assumed. The formulas for the tuning range are tested in the cases of alloy and diffused diodes having typical parameters, and it is found that a two-circuit amplifier or a regenerative converter can be tuned within 10% of the signal frequency without changing the pumping frequency. Orig. art. has: 29 formulas.

Card 1/2

L 63073-65

ACCESSION NR: AP5013343

ASSOCIATION: none

SUBMITTED: 24Feb64

NO REF SOV: 003

ENCL: 00

OTHER: 002

SUB CODE: EC

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Card 2/2

L 5143-66 EWT(d)/EWT(1)/EWA(h)
ACCESSION NR: AP5026910

UR/0109/65/010/010/1907/1909
621.375.933.029.65

AUTHOR: Berlin, A. S.; Vizel', A. A.; Vystavkin, A. N.; Popov, Ye. I.;
Khotuntsev, Yu. L.; Shtykov, V. D.

TITLE: Parametric amplification in the 8-mm band

SOURCE: Radiotekhnika i elektronika, v. 10, no. 10, 1965, 1907-1909

TOPIC TAGS: - parametric amplification, millimeter wave

ABSTRACT: In recently published articles (B. C. DeLoach, Proc. IEEE, 1963, 51, 8, 1153 and others) on millimeter-band semiconductor amplifiers, no characteristics have been reported. The present article describes the design and characteristics of and indicates an application for an 8-mm-band parametric amplifier. Coaxial-design epitaxial germanium diodes with 0.04—0.08-pf capacitance and 3—5-v reverse voltage were used in most experiments; critical frequency at a bias of -3 v was 280—430 Gc. The diodes operated as amplifiers at a low pumping power and an operating-point bias of 0.5—2 v. The diodes were tested within -60 + 85C; up to +60C, the leakage current at -1.5 v was 1 μ amp or less. The new diodes were tested in a single-cavity 8-mm parametric amplifier (see Fig. 1 of Enclosure). The signal is applied via a tapered waveguide matching unit 1. Behind the diode 4, a short-circuiting section 2 is arranged whose length equals an odd number of

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ACCESSION NR: AP5026910

quarter-waves. The amplifier is tuned by a short-circuiting line 3 that has a characteristic resistance of 100 ohm. Transformer 5 serves for adjusting the coupling. With a gain of 20 db, the passband was 78 Mc and the noise temperature, $600 \pm 150K$. The parametric amplifier was used in a modulation-type radiometer whose fluctuation sensitivity was measured. Orig. art. has: 3 figures and 2 formulas.

[03]

ASSOCIATION: none

SUBMITTED: 23Jan65

ENCL: 01

SUB CODE: EC.

NO REFO SOV: 002

OTHER: 003

ATD PRESS: 4134

Card 2/12

KHOTYACHUK, F. M.

47-58-2-30/30

AUTHORS: Los', G.A.; Khotyachuk, F.M.; Chupik, I.P.; Akopyan, A.

TITLE: Chronicle of School Work (Khronika raboty shkol)

PERIODICAL: Fizika v Shkole, 1958, Nr 2, p 96 (USSR)

ABSTRACT: 1) Pupils of the High School in Shurovchiki, Izyaslav region, Khmel'nitskiy Oblast', always co-operated with kolkhozes. They helped them in gathering crops, and the kolkhozes helped them in buying a power plant of 12 kw.
2) Pupils of 9th and 10th classes of the High School in Stavropol'-Kavkazskiy organized a reunion consecrated to new achievements in the fields of science and engineering.
3) During the past years the High School in Balludzhin, in the Azerbaydzhan SSR, bought more than 10,000 rubles worth of instruments and also received a wind operated electric power plant.

AVAILABLE: Library of Congress

Card 1/1

1. Group dynamics-USSR 2. Education-USSR

USCOMM-DC-54749

KHOTYAINTSSEV, N.P.

Decade generator for measuring infrasonic and sonic frequencies.
Avtomatika no.2:91-93 '56. (MIRA 9:10)

1. Institut budivel'noi mekhaniki Akademii nauk URSR.
(Frequency measurements)(Sound--Measurement)

KHOTYAINITSEV, N.P.

Instrument for measuring impact overloads. Avtomatyka no.2:94-95
'56. (MIRA 9:10)

1. Institut budivel'noi mekhaniki Akademii nauk URSR.
(Measuring instruments) (Impact--Measurement)

87444

S/123/60/000/024/012/014
A005/A001

6.8000 (3201, 1095, 1162)

Translation from: Referativnyi zhurnal, Mashinostroyeniye, 1960, No. 24, p. 259,
133958

AUTHOR: Khotyaintsev, N.P.

TITLE: A Method for Increasing the Measurement-Generator Accuracy and New
Makes of These Devices

PERIODICAL: Inform. materialy. In-t stroit. mekhan. AN UkrSSR, 1959, No. 11,
pp. 18-24

TEXT: The author describes a method for increasing the accuracy of measurement-generators and makes of these devices developed in the Institut stroitel'noy mekhaniki AN UkrSSR (Institute of Construction Mechanics of the Academy of Sciences of the Ukrainian SSR). For increasing the accuracy and the stability of tuning to the various frequencies in the subsonic and sonic frequency ranges, the tuning is performed discretely according to the decimal principle. The generator of sine-shaped alternating voltage of the P 46-1 (R46-1)-make with a three-digit decimal capacitor system of tuning is calculated for the frequency range from 0.1 to

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S/123/50/000/024/012/014
A005/A001

A Method for Increasing the Measurement-Generator Accuracy and New Makes of These Devices

10,000 cps and 5 w output. In the generator of the R46-2 make which is modernized by the use of the decimal capacitor tuning system and a three-digit digital frequency indicator, a continuous frequency control within the limits of 1% and excitation-range adjusters for the various frequencies were added. The voltage change limits at the output are 0 - 150 v; the maximum power is 4 w; the overall dimensions are 320 x 235 x 300 mm; the weight is 14.7 kg. In generators R46-3 and R46-4, the decimal capacitor systems are replaced by decimal systems with highly-stable resistances to increase the accuracy.

B.Yu.B.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

4X

ARCHIPOV, D.; KHOTYAKOV, M.

For economy and careful use of materials. Sov.profssoiuzy 5 no.7:28-32
Jl '57. (MLRA 10:8)

1.Predsedatel'komiteta profsoyusa Moskovskogo zavoda avtotraktornogo
elektrooborudovaniya (for Arkhipov). 2.Nachal'nik planovogo otdela
Moskovskogo zavoda avtotraktornogo elektrooborudovaniya (for Khotyakov)
(Moscow--Electric machinery industry)

KIRPICHNEVA, Irada Konstantinovna; BERKOV, N.P., prof., red.; KHOTYAKOV, Ya.I.
red.

[Bibliographical aids for research work; a practical reference book]
Bibliografiia v pomoshch' nauchnoi rabote; metodicheskoe i spravochnoe
posobie. Pod red. P.N.Berkova. Leningrad, Gos.pulb. biblioteka im.
M.M.Saltykova-Shchedrina, 1958. 480 p. (MIRA 11:3)
(Bibliography)

ACC NR: AP7009128

SOURCE CODE: UR/0413/67/000/003/0117/0117

INVENTOR: Khotyaintsev, N. P.; Loshak, M. G.; Korsakevich, N. I.

ORCA **APPROVED FOR RELEASE: 09/17/2001** **CIA-RDP86-00513R000722310015-0**

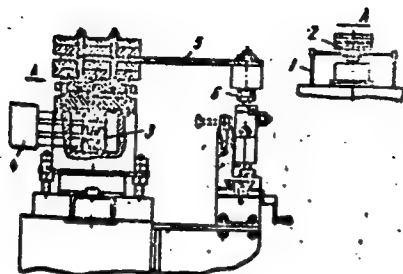
TITLE: An installation for impact fatigue testing. Class 42, No. 191187 [announced by the Ukrainian "Order of the Red Banner of Labor" Scientific Research Institute for the Design and Technology of Superhard Synthetic Materials and Tools (Ukrainskiy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy konstruktorsko-tekhnologicheskii institut materialov i instrumenta)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1967, 117

TOPIC TAGS: test facility, fatigue test, impact test, electric measuring instrument

ABSTRACT: This Author's Certificate introduces a fatigue testing installation which contains an electromagnet with an armature, a block on which this armature acts and a specimen holder. Test productivity is increased and impact duration is controlled by mounting the armature on an elastic suspension and connecting the electromagnet to a source of alternating current with a frequency equal to that of the mechanical system formed by the mass of the armature and the rigidity of the suspension. A flat spring connects the armature to the striking block.

ACC NR: AP7009128



1--elastic suspension; 2--armature; 3--electromagnet; 4--source of alternating current; 5--flat spring; 6--striking block

SUB CODE: 09, 13, 14/ SUBM DATE: 27Nov64

Card 2/2

BELYANKIN, Fedor Pavlovich, akademik; MALASHENKO, Sergey Vasil'yevich, doktor tekhn. nauk; KHOTYANITSEV, Nikolay Pavlovich, starshiy nauchnyy sotr.; MOZNIKER, Riva Abramovna, vedushchiy inzh.; RADZIYEVSKIY, Vadim Antonovich, vedushchiy inzh.; VASILEVSKAYA, Zoya Ivanovna, vedushchiy inzh.; DRAYGOR, D.A., doktor tekhn. nauk, otv. red.; KISINA, I.V., red. izd-va; LIBERMAN, T.R., tekhn. red.

[The R-50 universal vibratory testing unit] Universal'naya vibratsionnaya ispytatel'naya ustanovka R-50. Kiev, Izd-vo Akad. nauk USSR, 1961. 114 p. (MIRA 15:2)

1. Akademiya nauk USSR (for Belyankin).
(Testing machines)

YAKOVLEV, N.H.; KHOTYANOVA, G.B., redaktor; MANINA, N.P., tekhnicheskiy
redaktor

[Sketches on the biochemistry of sports] Ocherki po biokhimi
sporta. Moskva, Gos.isd-vo "Fiskul'tura i sport," 1955. 263 p.
(Sports) (Biochemistry) (MLA 9:1)

ZIMKIN, Nikolay Vasil'yevich; KHOTYANOVA, G.B., redaktor; SHALYGINA, G.A.,
tekhnicheskii redaktor

[Physiological aspects of strength, speed, and endurance; sketches]
Fiziologicheskaya kharakteristika sily, bystroty i vyносливости;
oчерki. Moskva, Gos. izd-vo "Fizkul'tura i sport," 1956. 205 p.
(PHYSICAL EDUCATION AND TRAINING) (MIRA 10:1)

TIMOFEEV, N.V., professor, doktor meditsinskikh nauk, redaktor; GIPPEN-
HMYTER, B.S., dotsent kandidat meditsinskikh nauk, redaktor;
KHOTYANOVA, G.B., redaktor; DOTSENKO, A.A., tekhnicheskiy redaktor

[Human physiology] Fiziologiya cheloveka. Pod obshchei red. N.V.
Timofeeva (1 chast'), i B.S.Gippenreitera (2 chast'). Moskva, Gos.
izd-vo "Fiskul'tura i sport," 1956. 391 p. (MLA 10:2)
(PHYSIOLOGY)

ZHUKOV, Ye.K., prof., doktor biolog.nauk, obshchiy red.; KHOTYANOV, G.B.,
red.; DOTSENKO, A.A., tekhn.red.

[Human physiology] Fiziologiya cheloveka. Izd.2. Moskva, Gos.
izd-vo "Fizkul'tura i sport," 1959. 606 p. (MIRA 13:4)
(PHYSIOLOGY)

SARKIZOV-SERAZINI, Ivan Mikhaylovich, prof.; DESHIN, Dmitriy Fotiyevich,
dotsent; KHOTYANOVA, G.B., red.; PEKLISOVA, T.D., tekhn.red.

[Medical control and exercise therapy] Vrachebnyi kontrol' i
lechebnaia fiskul'tura. Moskva, Izd-vo "Fiskul'tura i sport,"
1961. 287 p. (MIRA 15:2)
(EXERCISE THERAPY) (MASSAGE)

BIRYUKOVA, Zinaida Ivanovna; KHOTYANOVA, G.B., red.; FEKLISOVA, T.D.,
tekhn. red.

[Nervous system and sports] Nervnaia sistema i sport. Moskva,
Fizkul'tura i sport, 1962. 39 p. (MIRA 16:2)
(NERVOUS SYSTEM) (MOVEMENT, PSYCHOLOGY OF) (ATHLETES)

LETUNOV, S.P., prof.; KHOTYANOVA, G.B., red.

[Research methodology in sports medicine; a collection of transactions of institutes of physical culture] Metody issledovaniy v sportivnoi meditsine; sbornik trudov institutov fizicheskoi kul'tury. Moskva, Fizkul'tura i sport, 1963. 292 p. (MIRA 17:11)

1. Zaveduyushchiy sektorom sportivnoy meditsiny Gosudarstvennogo tsentral'nogo nauchno-issledovatel'skogo instituta fizicheskoy kul'tury (for Letunov).

KOROBKOV, Anatoliy Vital'yevich, doktor med. nauk, prof.; SHKURDODA, Vladimir Antonovich, kand. pedagog. nauk starshiy nauchnyy sotrudnik; YAKOVLEV, Nikolay Nikolayevich, doktor biolog. nauk, prof.; YAKOVLEVA, Yelena Sergeyevna, kand. biolog. nauk, starshiy nauchnyy sotrudnik; KHOTYANOVA, G.B., red.; MANINA, M.P., tekhn. red.

[Physical education for persons of various ages; biological fundamentals] Fizicheskaya kul'tura liudei raznogo vozrasta; biologicheskie osnovy. Pod red. A.V.Korobkova. Moskva, Izd-vo "Kul'tura i sport," 1962. 370 p. (MIRA 16:6)
(PHYSICAL EDUCATION AND TRAINING)

CHEREVKOV, M.A.; KHOTYANOVA, G.B., red.; DOTSENKO, A.A., tekhn.
red.

[Will, courage, friendship; a book on physical culture
for high-school students] Volia, smelost', družba; kniga
o fizicheskoi kul'ture dlia uchashchikhsia srednego shkol'-
nogo vozrasta. Moskva, Fizkul'tura i sport, 1963. 294 p.
(MIRA 17:2)

KHOTYANOVICH, A.V.

Some characteristics of metabolism in pine roots as related to the degree of soil aeration. *Fiziol.rast.* 5 no.5:455-457 8-0 '58.
(MIRA 11:11)

1. Lesotekhnicheskaya Akademiya imeni S.M. Kirova, Leningrad.
(Soil aeration) (Pine) (Roots (Botany))

KH. T. ANOVICH, A.V.

PHASE . BOOK REPRODUCTION 800/2113

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Booklet series: Polucheniye i primeneniye izotopov (Reports of Soviet Scientists). Production and Application of Isotopes. Moscow, Atomizdat, 1959. 508 p. (Series: Na; Study, vol. 6) 8,000 copies printed.

Book. (Title page): G.Y. Kuryanov, Academician, and I.I. Borilov, Corresponding Member, USSR Academy of Sciences; Ed. (Inside book): Z.B. Andreyenko; Tech. Ed.: Z.D. Andreyenko.

PURPOSE: This book is intended for scientists, engineers, physicists, and biologists engaged in the production and application of atomic energy to peaceful uses. It contains the reports and summaries and nonverbal students of the International Conference on the Peaceful Uses of Atomic Energy, and for the general public interested in atomic science and technology.

CONTENTS: This is volume 6 of a 6-volume set of reports delivered by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy held in Geneva from September 1 to 13, 1958. Volume 6 contains 35 reports on: 1) modern methods for the production of stable radioisotopes and their labeled compounds, 2) research results obtained with the aid of isotopes in the field of chemistry, metallurgy, machine building, and agriculture, and 3) dosimetry of ionizing radiation. Volume 6 was edited by G.Y. Kuryanov, Candidate of Medical Sciences, and I.I. Borilov, Candidate of Chemical Sciences; and V.Y. Sedukhin, Candidate of Medical Sciences. See 800/2011 for titles of volumes of the set. References appear at the end of the article.

36. Khergal', A.Y., V.I. Karpov, and V.I. Smirnov. Cobalt Sources of High Intensity for Radiative Action (Report No. 224) 200
37. Gerasimov, M.G., Ye. Ye. Kovalev, and V.I. Popov. Gamma Radiation Inside and Outside Extended Sources (Report No. 208) 211
38. Aclintsev, E.E., K.A. Bakh, V.Y. Koshchikov, Ye.G. Orlovskaya, Z.Y. Yershova, and E.A. Petrovskaya. System of Radiometric Measurement of Radioactive Isotopes (Report No. 207) 207
39. Aclintsev, E.E., V.F. Koshchikov, V.Y. Koshchikov, and V.Y. Smirnov. Application of Radiometric Spectroscopy Methods to Beta and Gamma-ray Dosimetry (Report No. 205) 205
40. Khergal', A.Y., V.I. Gal'vinsky, and V.I. Popov. Instrument for Measuring Small Sources of High-energy Neutrons (Report No. 203) 203
41. Gerasimov, M.G., V.I. Koshchikov, and V.A. Koshchikov. Measuring and Analyzing Air Contamination by Low Concentrations of Aerosol Alpha Emitters (Report No. 219) 219
42. Zelenikhin, O.Y., V.I. Voznesenskiy, and O.A. Semakova. Photoanalysis of Radioactive Isotopes by Quantitative Radiometric Methods (Report No. 215) 215
43. Koshchikov, Ye.Ye., and A.Y. Koshchikov. Studying the Transfer, Distribution, and Transformation of Certain Physiologically Active Compounds in Plants (Report No. 213) 213
44. Gerasimov, M.G., Ye. Ye. Koshchikov, and A.Ye. Petrovskiy. Rhythm of Absorption and Secretion in Nerve (Report No. 201) 201
45. Koshchikov, A.Y., and V.A. Koshchikov. Effect of the Microscopic Micro-organisms on the Absorption and Secretion of Phosphorus and Sulfur by the Growing Roots of Woody Plants (Report No. 212) 212
46. Koshchikov, A.Y., and E.B. Porfirova. Absorption of Phosphorus Tracers by Cultivated Plants in Relation to Their Resistance to Cold (Report No. 211) 211
47. Andreyenko, Z.B., A.Y. Voznesenskiy, V.A. Koshchikov, and A.Y. Koshchikov. Some Results of Using Radioactive Isotopes for Plant Protection (Report No. 209) 209
48. Koshchikov, A.Y., and V.A. Koshchikov. Some Results of Using Radioactive Isotopes for Plant Protection (Report No. 209) 209

KHOTYANOVICH, A.V.

Changes in the optical properties of leaves of the oak *Quercus rubra* L. caused by gibberellic acid. Bot. zhur. 46 no.1:131-132
Ja '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity rasteniy, Leningrad.

(Gibberellic acid) (Leaves—Optical properties)

SHAPIRO, I.D.; KHOTYANOVICH, A.V.; VEDENEYEVA, N.A.

Physiological effect of frit fly larvae (*Oscinosoma frit* L.) on
embryonic tissues of corn. Dokl. AN SSSR 140 no.4:978-980 0 '61.
(MIRA 14:9)

1. Vsesoyuznyy institut zashchity rasteniy. Predstavleno
akademikom Ye.N.Pavlovskim.
(Frit flies) (Corn (Maize)--Diseases and pests)

POLYAKOV, I.M.; ANDREYEV, S.V.; KHOTYANOVICH, A.V.

Polymeric and macromolecular compounds in the protection of plants.
Zashch. rast. ot vred. 1 bol. 5 no.9:14-17 S '60. (MIRA 15:6)
(Plants, Protection of) (Agricultural chemicals)
(Polymers)

VOYEVODIN, A.V.; BESHANOV, A.V.; KHOTYANOVICH, A.V.

Testing granulated herbicides. Zashch. rast. ot vred. i bol.

6 no.4:18-19 Ap '61.

(Herbicides)

(MIRA 15:6)